

Appln No.: 10/661,444
Amendment Dated: December 8, 2006
Reply to Office Action of June 8, 2006

REMARKS/ARGUMENTS

This paper is filed together with a Request for Continued Examination in response to the Office Action mailed June 8, 2006 for the above-captioned application. A three-month extension of time is herein requested in order to timely file this paper. The Commissioner is authorized to charge deposit account number 50-3618 for any fees deemed due.

The Examiner has maintained the rejection of all claims of the present application under 35 USC § 103(a) as obvious over Adams ('812) in view of secondary references. Applicants submit that Adams is not analogous art and that even if it were analogous art the combination of references fails to render the claims of the present invention obvious. Reconsideration and further examination are respectfully requested.

Applicant has added new claim 20. New claim 20 is identical to current claim 1, with the proviso that the container further comprises a carbonated liquid. Support for this claim can be found throughout the specification and no new matter has been added.

(1) The amendment to the claims made on April 5, 2006 is supported by the specification:

As a first matter, the Examiner states that Applicant's amendment to claims 1, 10, and 11 filed on April 5, 2006 to detail that the "polyester is not biaxially oriented" is not supported by the specification. See page 3 last paragraph of the office action. Applicant respectfully requests the Examiner to withdraw his statement that this amendment is not supported by the specification. As detailed in paragraph 3 in Applicant's 132 declaration filed on November 2, 2005, it would be apparent to a person skilled in the art that from the methods described in ¶¶ 029 - 033 of the present application that "the containers of the present invention are not biaxially oriented." Therefore the amendment reflects an inherent characteristic of the containers of the invention as described in the specification and is not new matter.

(2) Adams is not analogous art:

Next, the Examiner maintains his rejections of all claims of the present application as obvious over Adams in view of one or more secondary references. Applicant resubmits that the primary reference (i.e. Adams) is non-analogous art with respect to both (1) the present invention and (2) the secondary references with which the Examiner seeks to combine it, and therefore that it should not be used as a reference under 103 against the present claims.

The Examiner simply states that Adams is analogous art, because "Adams' patent is drawn to a bottle or container." See page 2 of the office action. Applicant submits that the Examiner's reasoning is incorrect and that this statement is legally insufficient to support the contention that Adams' is analogous art. The simple fact that Adams is drawn to a "bottle or container" does not automatically correlate to a finding that Adams is analogous art to the present invention.

Applicant reminds the Examiner that he must determine what is "analogous prior art" for the purpose of analyzing the obviousness of the subject matter at issue. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).¹

¹See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992) ("A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem."); *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993); and *State Contracting & Eng'g Corp. v. Condotte America, Inc.*, 346 F.3d 1057, 1069, 68 USPQ2d 1481, 1490 (Fed. Cir. 2003) (where the general scope of a reference is outside the pertinent field of endeavor, the reference may be considered analogous art if subject matter disclosed therein is relevant to the particular problem with which the inventor is involved).

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The containers of Adams and the containers of the present invention are designed for different materials and therefore are designed to solve different problems. One skilled in the art of carbonated beverage containers would not have turned to the art of high pressure/cryogenic gas containers to find solutions to the problems that the containers of the present invention solve. In other words, one skilled in the art of carbonated beverage containers would not have turned to Adams to produce a container that increases the shelf life of a carbonated beverage.

Applicant's invention provides containers for liquids that have a dissolved carbon dioxide gas content (e.g. bottles for carbonated beverage). More specifically, Applicants invention provides containers for improving the shelf life of the carbonated beverages. This is why the present application and claims were assigned an international patent classification of B65D 1/00 which lists subject matter of "Containers having bodies formed in one piece, e.g. by casting metallic materials, by moulding plastics, by blowing vitreous material, by throwing ceramic material, by moulding pulped fibrous material, by deep-drawing operations performed on sheet material ... such as beer cans, pop bottles) See <http://www.wipo.int/classifications/ipc/ipc8/?lang=en>.

Adams' is not directed to a container for storage of liquids having a dissolved gas (i.e. carbon dioxide) content. Adams' container is for the storage of **high pressure gases**, or **cryogenic gases**. Adams disclosure is directed to providing light-weight containers for these gases that are made from a polymer rather than made from metal. See Adams at column 2 lines 55-60. Adams disclosure further teaches that due to the fact that the container for high pressure/cryogenic gasses and that is made from a polymer, additional structural support (in the form of a structural overwrap) is required. *Id* at lines 66-68.

Adams discloses that the structural overwrap may be formed around the containers or within the polymer layer such that it provides sufficient structural support to maintain the stability of the container. See Adams column 2 lines 66-68. This is likely why Adams' application was assigned an international classification for its field of invention of B65D 25/34 which lists subject matter of "Coverings or external coatings (of containers made by

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folding or erecting blanks made of paper; for bottles or jars; wrappers). *See* <http://www.wipo.int/classifications/ipc/ipc8/?lang=en>. The problem of maintaining the structural integrity of the lightweight **high pressure/cryogenic gas** containers is not related to the problems solved by the present invention.

While the Examiner is correct to state that the “Adams’ patent is drawn to a bottle or container” (hence the reason for the same B65D international class top genus as the present application), the fact that Adams and the present application are not assigned to the same subclass further evidences the fact that Adams is not analogous art to the present invention. The problems encountered in the field of containers for high pressure/cryogenic gasses are unrelated to the problems encountered in containers for carbonated beverages as described above. The Examiner’s reasoning and comparison is equivalent to comparing containers for the storage of perfume to containers for the storage of rocket fuel. The containers and fields of endeavor are completely unrelated.

Assuming *arguendo* that Adams and the present invention were assigned the same international classification, Adams is not relevant to the particular problems with which the present invention is concerned and further Adam’s containers have structural differences from the containers of the present invention as discussed below.

(3) Even if Adams were considered to be analogous art, the combination of references would fail to render the claims obvious

If it were the case that Adams were analogous art to the present invention, which it is not, Adams and the secondary references do not arrive at the limitations of the present claims. Adams and the secondary references fail to disclose a **non-biaxially oriented polymer with reinforcing agents disposed within the polymer** as claimed by all of the claims of the present invention. The Examiner continuously fails to address these limitations. Instead the

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Examiner inappropriately dissects Adams' disclosure and puts it back together to create a mosaic that resembles the present invention.

The Examiner states that Adams' patent discloses that the, "polymer may be formed into the liner by an injection molding process." See page 3 second full paragraph of the office action. The Examiner cites Adams at column 5 lines 5-12 discussing a "first" container embodiment having a multilayered wall and concludes that since the inner layer 14 can be made from injection molding then the wall of Adam's has similar properties to the walls of the present application. This conclusion is wrong. The Examiner fails to recognize that the cited section of Adams relates to the first (multilayered) container embodiment of Adams that has an inner polymer layer that contains **no** reinforcing agent. The reinforcing agent is provided via a structural overwrap 16 that is disposed over this inner polymer layer 14.

The Examiner then goes on to state that Applicant's argument that "Adams' Fiber layer is a separate layer surrounding an inner layer" is not persuasive because Adam's discloses a container having composite wall with structural fibers embedded within a resinous matrix. The Examiner cites Adams at column lines 45-49 for this erroneous conclusion. The Examiner fails to recognize that this cited section of Adams relates to a "second" embodiment where the wall contains **no** inner layer as described above, and hence no disclosure that it is made via and injection molding process. This is not a disclosure of the present invention.

Applicant submits that the Examiner cannot pick and choose sentences and otherwise rearrange Adams to make it say what he wants it to say. Rather the Examiner must take what the reference as a whole discloses. In light of the above remarks, Applicant resubmits that Adams fails to disclose a **non-biaxially oriented polymer with reinforcing agents disposed within the polymer** and that the secondary references fail to provide this missing limitations.

The combination of Adams and any of the secondary references does not arrive at the presently claimed invention. As detailed in Applicant's previous response, the containers

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cited in the secondary references are also biaxially oriented containers, formed for example by stretch-blow molding techniques. Furthermore, Applicant reminds the Examiner that he must consider the prior art and its teachings as a whole instead of what isolated references by themselves disclose. *In re Ehrreich*, 200 USPQ 504, 509-510 (CCPA 1979). The Examiner has not done so as discussed below.

Mori teaches that a surfactant applied to surface of a biaxially oriented beverage container is able to reduce the transfer of carbon dioxide gas from a liquid phase to a gas phase when the bottle is opened. *See* Mori, column 2 line 52 to column 3 line 5. It does not mention nor does it provide disclosure of any values or examples that demonstrated how to reduce the transfer of carbon dioxide gas from a liquid phase to the gas phase through the non-oriented reinforced polyester container wall. Mori only cites US 3,733,309 which discloses that a bottle may be made from biaxially oriented polyethylene terephthalate. Applicants note that the bottles of the '309 patent (and also of Mori) have creep properties (i.e. properties related to gas permeability and thus its shelf life with respect to the loss of carbon dioxide content) which are substantially worse than the containers of the present invention. In particular, the bottles of the '309 patent show creep of less than 5% after 90 days. *See* the '309, column 16, line 71 - column 18, line 1). In contrast, the containers of the present invention have creep less than 3% after half a year (i.e. less creep in twice the time). *See* ¶ 35 of the present application.

The Examiner cites Duse for teaching of a reinforced biaxially oriented polyester bottle with glass fibers for the purpose of resisting fracturing during stretch-blow molding. *See* page 6 of the office action. The Examiner again then makes the erroneous statement that Duse, "teaches a reinforced polyester bottle wherein said glass fibers are present in an amount of at least 20 wt% (1-60 wt%, col. 2, lines 45-46) . . ." *See* page 6 of the office action. Even if Duse taught of a non-biaxially oriented container, which it does not, the Examiner's citation of a reference (i.e. US 4,123,415) from the background section is not proper to arrive at the fiber loadings of the present invention. Throughout the specification, Duse **teaches the drawback** associated with adding fiber reinforcing agents at any significant level to materials that are to be

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stretched and blown to produce biaxially oriented products. See column 1, line 65 to column 3, line 20. The invention disclosed in Duse is the discovery that fibers with specific properties can be introduced into bottles, like that of Mori, that are biaxially oriented and achieve increases in strength when incorporated in amounts of between 0.3 and 5 wt. %. See column 3 lines 23 - 34. This is not the present invention.

Duse teaches of the problems attributed to and the general unsuitability of using high fiber loading levels in "biaxially oriented polyester containers". These problems **are not** observed in the "non-biaxially oriented reinforced polyester containers" of the present invention. In fact, a surprising benefit of using high fiber loading in the non-biaxially oriented materials of the present invention has been found. As illustrated in the previously filed Rule 132 declaration, at higher levels of fiber loading than disclosed in the actual examples of Duse (i.e. at 15 wt. % and 50 wt. % fiber loading), Applicants have found that the fibers themselves actually contribute to the reduction in gas permeability as well as to the strength of the container, and thus achieve materials that have superior performance compared to the materials of the prior art.

The Examiner also rejected claims 10 - 19 as obvious over (1) Adams in view of (2) Mori, (3) Duse, and (4) Zimmerman. Zimmerman is cited only for providing a reference that teaches polyester with 20-50 wt % glass fiber. It does not overcome the deficiencies of references (1) - (3) set forth above, *inter alia*, and Applicant submits that the rejections to these claims is likewise overcome.

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For these reasons, Applicant submits that all of the claims of this application, as amended, are in form for allowance. Favorable reconsideration is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Marina T. Larson', is written over a horizontal line.

Marina T. Larson, Ph.D
Reg. No. 32038

Ryan E. Anderson
Reg. No. 51405

Attorney(s)/Agent(s) for Applicant(s)
(970) 262 1800